UNITED STATES DEPARTMENT OF COMM
National Oceanic and Atmospheric Administra
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

September 8, 1998

MEMORANDUM FOR: Rolland A. Schmitten
Assistant Administrator
for Fisheries

FROM: Steven Pennoyer
Administrator, Alaska Region

SUBJECT: Determination of a Commercial Fishery Failure Due to a Fishery Resource Disaster Under Section 312 (a) of the Magnuson-Stevens Act Fishery Conservation and Management Act--DECISION MEMORANDUM

I request that you approve and make the determination under Section 312(a) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) in finding that the Bristol Bay, Yukon, and Kuskokwim commercial salmon fisheries failed in 1998 due to a fishery resource disaster. Such a determination would authorize the Secretary of Commerce (Secretary) to provide funds appropriated for this purpose to the State of Alaska to assess the economic and social effects of the commercial fishery failure or to support any activity that would restore the fishery or prevent a similar failure and assist such fishing communities affected by the failure.

In the event that disaster relief funding is appropriated, NMFS will continue to cooperate with the State to insure that the distribution of these funds is consistent with the conditions specified in the Magnuson-Stevens Act.

BACKGROUND AND NEED FOR ACTION

In a letter to Secretary Daley dated August 13, 1998, the Governor of Alaska, Tony Knowles, formally requested that the Secretary declare a fishery resource disaster pursuant to Section 312(a) of the Magnuson-Stevens Act. Before making any disaster relief funds available to the State of Alaska under the authority of Section 312(a), the Secretary must determine that:

- A fishery resource disaster resulted from natural causes, man-made causes beyond the control of fishery managers, or undetermined causes, and, if so

- A commercial fishery failure occurred due to the fishery resource disaster.

Did a fishery resource disaster occur?

Extremely low returns of sockeye and chum salmon occurred in Bristol Bay and the Yukon River and Kuskokwim River drainages in 1998. This low return, as indicated by low harvests, prompted a disaster declaration by the Governor of Alaska for western Alaska. The total projected return of sockeye salmon to Bristol Bay in 1998 was 32.1 million fish. Of this amount, 20.6 million fish were expected to be available for commercial harvest. As of August 16, 1998, when virtually all of the total sockeye run should have returned to Bristol Bay river systems, only about 18.06 million fish had returned. This return rate is about 44 percent less than forecasted for 1998, and 10 percent less than returned in 1997, which also was determined to be a disastrous year for this fishery.

On the Kuskokwim River and Yukon River, the State of Alaska's Department of Fish and Game (ADF&G) makes broad generalized projections of salmon run strength in terms of average, below or above average abundance. Based on these projections, ADF&G forecasts a predicted range of possible commercial catches for the year. The ADF&G projection for the Kuskokwim coho salmon run in 1998, was below average with a commercial catch within the range of 400,000 to 600,000 fish. The actual catch of Kuskokwim coho this year was only 210,000 fish, 52 percent of the low end of the predicted range.

On the Yukon River, the forecast for the fall chum salmon run indicated about 880,000 fish would be available for harvest in 1998, but instead only about 350,000 fish returned, barely enough to allow a subsistence fishery, the highest priority fishery. Time limitations on the subsistence fishery have been proposed and a total closure is likely. Yukon River king salmon abundance is indicated by the harvest. The ADF&G predicted a commercial catch of between 88,000 and 108,000 Yukon king salmon in 1998, but only 42,000 have been harvested, less than half of the low end of the forecasted range. Likewise, the ADF&G projected a commercial catch of Yukon River summer chum salmon of between 500,000 and 800,000 fish in 1998, but only 28,000, or 5.6 percent of the low end of the forecasted range, have been harvested.

What caused the fishery resource disaster?

NMFS is unable to determine the exact cause of the apparent collapse of Bristol Bay, Yukon River, and Kuskokwim River

fisheries resources. The inordinately poor returns do not appear to result from low parent-year escapements or inaccurate forecasts. Parent-year escapements for fish returning in 1997 and 1998 were all at or above desired levels. Pre-season and inseason-forcasting programs for Bristol Bay sockeye salmon have predicted, with reasonable accuracy, the timing and size of the sockeye run from 1987 through 1996. The same methodology was used in 1997 and 1998.

One hypothesized cause has been increased predation by marine mammals and beluga whales in particular. Based on research conducted from the 1950s to the 1990s, sockeye salmon predation by beluga whales should account for only a small factor in the low return of this salmon species. Beluga whales have been estimated to consume about 5 percent of the annual smolt outmigration from the Kvichak River and only 0.5 percent of the annual adult sockeye run. Another hypothesis is interception of salmon outside of the U.S. Exclusive Economic Zone (EEZ). Under multilateral agreement (including Canada, Japan, Russia, and the United States) no directed fishing is allowed outside the EEZ. Although a limited amount of fishing by other nations (not party to the agreement) has occurred, this illegal interception of Bristol Bay sockeye salmon on the high seas can not account entirely for the unexpected low returns of fish in 1997 and 1998.

Existing evidence indicates natural causes in the marine environment. Unusual weather patterns in 1997 and 1998 are well documented. Water temperatures in the Bering Sea during the summer of 1997, were at record high levels and are widely considered to be a causal factor of last year's weak returns of salmon. Similar observation of weather oscillations occurred on a global basis. Other indicators point to marine stress as a causal factor in reduced salmon survival in 1997 and 1998. Returning salmon appear smaller than usual and arrived late. Migratory pathways were changed from previous years and evidence exists of increased parasitism and predation, both indicators of marine stress. Anecdotal evidence exists also that some returning salmon were emaciated indicating a lack of their food supply. Fish under such stress are less vigorous and more likely to suffer higher natural mortality rates. Taken together, these indicators underscore the likely role of changes in the marine environment on reduced western Alaska salmon production in 1997 and 1998.

Did a commercial fishery failure occur due to a fishery resource disaster?

A commercial fishery failure occurred as a result of the inordinately poor return of salmon to Bristol Bay and to the Kuskokwim and Yukon River systems. The overall salmon catches in western Alaska in 1998, were the poorest in two decades. The Bristol Bay harvest of 9.9 million sockeye salmon was less than half the forecast catch of 20.6 million salmon and lower than the harvest of 12.4 million sockeye in 1997, which also was determined by NMFS to be a disaster that year. The catch in 1998, was the poorest since the catch of 4.9 million fish in 1977, when the Bristol Bay fishery was still feeling the impacts of the weather-related low production that warranted a disaster declaration under President Richard Nixon in 1974.

The weak Bristol Bay harvests of the past 2 years contrast sharply with the record production of sockeye earlier in the 1990s. An all-time record catch of 43.6 million sockeye occurred in 1995. The average annual harvest for the 10-year period prior to 1997 was 29.5 million sockeye. The value of the 1998 Bristol Bay sockeye harvest is estimated at $50 million, down from the ex-vessel value of last year's catch, $62 million, and well below the average value over the previous decade (1987-1996) of $158 million and peak of $199 million in 1990.

In the Kuskokwim River, the harvest of 180,000 chum salmon was better than last season's catch of only 17,000 but well below the recent average of 400,000 chums. The catch compares with harvests as high as 710,000 in 1995 and over 1.4 million in 1988. The 1998 harvest was only 60 percent of the forecast of 300,000 chums and it had a value of less than $200,000 for Kuskokwim River fishermen.

In the Yukon River, the harvest of 43,000 king salmon in 1998 was the poorest since statehood, and the total return of Yukon River king salmon is believed to be the lowest in this century. The 1998 harvest is less than half of the annual average of 100,000 kings during recent years. The usually stable king salmon fishery has been the mainstay of the Yukon economy, producing annual average gross revenues totaling $5.6 million. This year, the value of the fishery dropped to less than $2 million. According to the Association of Village Council Presidents, earnings per Yukon River permit holder dropped from an average of $8,900 to just $2,800 in 1998.

The harvest of 29,000 Yukon River summer chum salmon also was drastically low in 1998, down 95 percent from a long-term annual

average of over 600,000 chums in recent years. Production highs occurred in 1995 with 800,000 chums harvested and in 1988 with 1.6 million harvested. A healthy catch of 500,000 to 800,000 summer chums had been anticipated. The summer chum fishery usually added several hundred thousand dollars annually to the local economy. This year, the value of the fishery was less than $30,000. Because of the poor returns, no commercial fishing time was allowed in the upper Yukon districts Y4A and Y4B, including Kaltag, Galena, and surrounding villages.

The Yukon and Kuskokwim and the entire Bristol Bay regional economies are affected by the poor salmon returns. The State Fisheries Business Tax, paid by the processing industry for salmon is 3 percent of the exvessel value of the fish. One half of the revenues from this tax is paid back to the local governments in whose boundaries the processing occurred. In addition, many local governments assess a local tax on the sale of fish to processors. These local taxes range from 1 percent to 3 percent. Revenues from the State tax were down $2.3 million in 1997, and are estimated to be down another $2.8 million in 1998, due to the poor landings of salmon. The anticipated lost tax revenue in 1998 represents a 68 percent decrease as compared to the recent 5-year average. The local tax revenue loss in 1998 is expected to be a 60 percent decrease from the 5-year average.

Subsistence needs for salmon were met for most families in the Yukon, Kuskokwim, and Bristol Bay regions, but that was not the case for the villages of Hooper Bay, Scammon Bay and Chevak. Residents of those villages said that due to unusual wind patterns, the salmon on which they depend passed by the region far offshore and were not available to their subsistence nets. The salmon did not come near shore and neither did seals. Although some whitefish and other subsistence foods were harvested, the 2,200 residents of these three villages were denied access to their two primary sources of protein, salmon and seals. Hooper Bay residents could not recall a similar occurrence since the 1950s.

The State of Alaska Department of Labor (DOL) estimates almost 4,200 direct resident commercial fishing jobs in the Yukon-Kuskokwim region, including fishermen and crew. Village residents depend on the commercial fishing season to pay for such basics as electricity and water/sewer. Many residents of the Yukon and Kuskokwim regions said they had been disconnected, or threatened with disconnect of power for failure to pay their electric bills. The commercial and subsistence economies are so intertwined in the Yukon-Kuskokwim region that if the commercial

fishery collapses, so does the subsistence economy and with it the support of many public and private institutions.

The State's DOL also estimates some 2,800 direct resident fishing jobs in Bristol Bay, including resident permit holders and crew, but not including other Alaskans that live outside of the region. The income from this employment is an important supplement to an otherwise subsistence livelihood for many persons in western Alaska. In addition, the poor salmon catches may prevent liquidation of debt incurred to go fishing. A fisherman may spend up to $20,000 to gear up for the Bristol Bay season. Many of these bills to local stores and processing companies are marked "PAF" for "Pay after Fishing." Lacking the money to pay back their bills for two seasons in a row, the receivables of processing companies and local businesses are well above the usual amount.

Another economic indicator of the commercial fishery failure in western Alaska is the loss in capital value in limited entry permits. For example, before the 1997 season, a Bristol Bay permit would have been worth about $180,000. Current permit value is reported to be about $85,000.

Finally, the consistently low market price of salmon has contributed to the western Alaska commercial fishery failure. Low abundance of a commercial fishery resource does not always result in a commercial fishery failure. Low commercial catches due to low abundance usually has the mitigating effect of increasing the market value of the catch. An increase in the value of western Alaska salmon is not expected because of the continued growth in production of farmed salmon and the Asian financial crisis.

Need for action.

Secretary Daley visited Alaska last month and toured some of the affected area. He assured the Governor at that time that NMFS would expeditiously review the State of Alaska request for disaster relief assistance this year, in addition to the relief provided in response to the disaster determination for the same area in 1997. The NMFS Alaska Region review is now completed, and concludes that economic relief for the affected areas of western Alaska, as outlined by the Governor in his request of August 13, 1998, is clearly indicated.

RECOMMENDATIONS

I recommend that you make the determination under Section 312(a) of the Magnuson-Stevens Act, that (1) a relative absence of fish has resulted in a fishery resource disaster of undetermined but probably natural causes, and (2) this resource disaster caused a commercial fishery failure in Bristol Bay and the Kuskokwim and Yukon Rivers this year. If you concur, I recommend that you sign the attached declaration and the attached information memorandum to the Assistant Secretary.

1. I concur Gary C. Matlock for RAS 9-9-98.
Date

2. I do not concur _____.
Date

Attachments